

REMARKS/ARGUMENTS

Favorable reconsideration of the present application is respectfully requested.

Claim 7 has been amended in accordance with the claim objection of paragraph 2 in the Office Action, and no longer recites an improper multiple dependency.

Claims 1 and 4 have been amended to further recite that the sensor is positioned radially inward of the cylindrical portion of the metal core and axially inward of the flange of the metal core. Basis for this is evident from Fig. 3.

Claims 1 and 4 have also been amended to further recite a labyrinth seal provided between an outer peripheral edge portion of an outward flange of the slinger of the rotation-side seal member and a resin member formed by the molded resin. Basis for this is found at lines 5-7 of page 13.

New dependent Claims 8-9 further recite that the sensor is positioned closer to the pulser than is any portion of the metal core of the fixed side seal member. Basis for this is also evident from Fig. 3: the sensor 11 is mounted radially inward the cylindrical portion 41 of the metal core 21 and so is positioned closer to the pulser 10 than is the metal core.

As is described in the specification, in a rolling bearing device having a sensor, there is a need to reduce the axial dimension of the sensor without introducing an adverse effect on the accuracy of the detecting operation of the sensor (page 2, lines 3-10). According to a feature of the invention, this problem is addressed by positioning the sensor radially inward of the cylindrical portion of the metal core and axially inward of the flange of the metal core, so that no metal portion exists between the sensor and the pulser. For example, the sensor 11 in Fig. 3 is positioned radially inward of the cylindrical portion 41 of the metal core 21 of the fixed side seal member 8, and axially inward of the flange 42 of the metal core. Since no metal portion exists between the sensor and pulser, the metal core 21 will not adversely affect

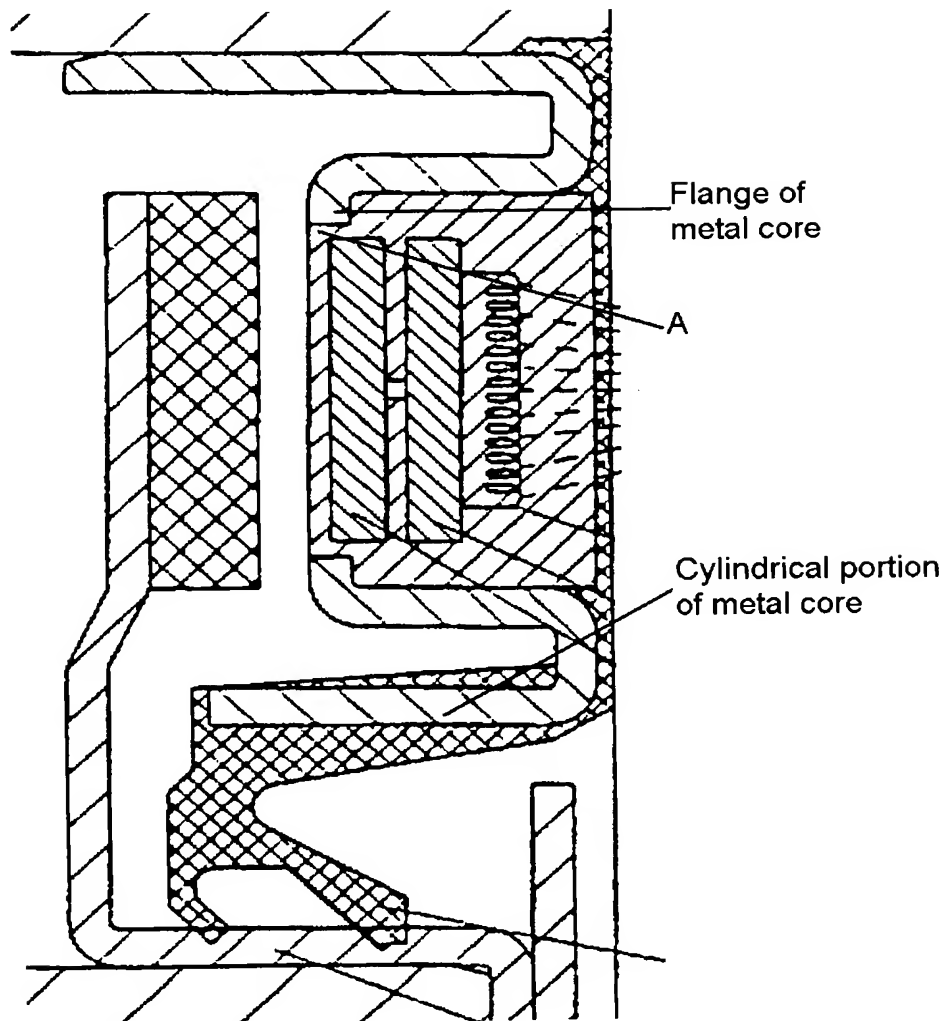
the accuracy of the detection by the sensor, and the sensor is positioned close to the pulser, both of which improve accuracy (p. 12, lines 9-17).

Claims 1-7 were rejected under 35 U.S.C. §103 as being obvious over U.S. patent 5,898,388 (Hofmann et al). It is respectfully submitted, however, that the amended claims define over this reference.

Hofmann et al discloses a rolling contact bearing with a rotational speed measuring device. According to Hofmann et al, the bearing includes a seal device having a fixed side portion including a core 5 provided with a contact seal 10. A rotation side portion includes an arm 11 carrying the encoder disk 4. A speed sensor 7 is provided as part of a unit 6 held in a recess of the core. Fig. 1 appears to show that a part of the core located between the speed sensor 7 and the encoder disk 4 has been removed.

The Office Action indicates that Hofmann et al does not disclose that the core 5 is metal but that this would have been obvious. In fact, the hatching of the core 5 in the figures of Hofmann et al indicates metal.

However, Hofmann et al does not teach the presently claimed sensor positioned radially inward of the cylindrical portion of the metal core and axially inward of the flange of the metal core. Instead, as is evident from the annotated partial Figure 1 of Hofmann et al shown below, the sensor 7 is positioned radially outward of the cylindrical portion of the metal core and axially outward of the flange of the metal core. Therefore, the removal of a part of the core located between the sensor and the pulser is required in Hofmann et al, but is unnecessary in the invention.



Additionally, Hofmann et al does not teach the presently claimed labyrinth seal provided between an outer peripheral edge portion of an outward flange of the slinger of the rotation-side seal member and a resin member formed by the molded resin. Instead, Hofmann et al provides the contact seal 10, which is subject to wear and can produce wear residue that may foul the sensor.

New dependent Claims 8-9 further recite that the sensor is positioned closer to the pulser than is any portion of the metal core of the fixed side seal member. Instead, the sensor 7 is retracted within a recess formed by the removed portion of the core, whereby the metal

core 5 is closer to the encoder 4 than is the sensor 7 at region "A" shown in the figure above.

The amended claims therefore define over this prior art.

Applicants therefore believe that the present application is in a condition for allowance and respectfully solicit an early notice of allowability.

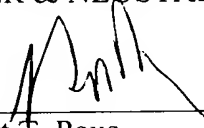
Respectfully submitted,

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